UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/740,200	12/18/2003	Charles R. Obranovich	SYS-P-1230 (8364-90585)	2226

7590 10/06/2009

Patent Services Group
Honeywell International, Inc.
101 Colubia Road
P. O. Box 2245
Morristown, NJ 07962

EXAMINER	
PAUL, DISLER	

ART UNIT	PAPER NUMBER
2614	

MAIL DATE	DELIVERY MODE
10/06/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/740,200	Applicant(s) OBRANOVICH ET AL.	
	Examiner DISLER PAUL	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-26;32;35-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-26;32;35-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

In regard to Applicant' amendment as "having circuitry that automatically received signal at a predetermined time" has been analyzed and rejected over new prior art; as in Kimura (US 7,127,070 B2) .

Kimura et al. disclose of a broadcasting system wherein the similar concept of having a microphone including circuitry that automatically detects a received signal at a predetermined time(fig.1 (10); col.4 line 40-58; col.6 line 18-42/microphones being selectively used during diagnosis as per each block to detect signal at a predetermined time) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

Similarly, the applicant's argument that the prior art of record fail to disclose of "microphone which receive signal and generate an indicator of intelligibility on a per microphone basis" as in claim 9; has been analyzed and is non persuasive.

Baraneck et al. (US 2003/0021188 A1) specifically disclosed of a system comprising: microphone including circuitry that automatically detects a received signal, analyzes the received signal and evaluates intelligibility of audio received by the respective microphone and

generates an indicator of intelligibility on a per microphone basis (fig.2 (12,14); par [0022,0026, 0031-0032]/detectors with having a microphone as per locations in the buildings with determining the strength as per microphone for determining which is closest to incident).

Similarly, in regard to the applicant's argument as failed to provide any motivation for combining Barack et al. and Jacob for the feature "analyzing the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility" has been analyzed and is non-persuasive.

Since, such feature as implemented would have further provided an improved measured audio intelligibility as received by the microphone.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2-3; 7-8; 11-26 are rejected under 35 U.S.C. 102(b) as being anticipated over Baraneck et al. (US 2003/0021188 A1) and Kimura (US 7,127,070 B2) and Jacob (US 6,792,404 B2).

Re claim 2, Baraneck et al. disclosed a system comprising: a plurality of fixedly mountable microphones (fig.1 (14); par [0022,0026]/each detector unit with microphones to monitor); and circuits coupled to respective microphones including circuitry that automatically detect a

receive signal and analyzed the receive signal for evaluating intelligibility of audio received by the respective microphones and generating an indicator of intelligibility on a per microphone basis (fig.1 (16,14,18-20); par [0022,0026, 0031]/sonic wave or and microphone detector for determining the strength/intelligibility as per microphone-basis in each location and automatically receive the signal during monitoring).

Although, Baraneck et al. disclose of such automatically detecting a received signal, but, Baraneck et al. never specify of having the microphone including circuitry that automatically detects a received signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of having a microphone including circuitry that automatically detects a received signal at a predetermined time (fig.1 (10); col.4 line 40-58; col.6 line 18-42/microphones being selectively used during diagnosis as per each block to detect signal at a predetermined time) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating the microphone including circuitry that detects a received signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker

broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

However, the combined teaching of Baranek et al. and Kimura et al. as a whole, failed to disclose of the analyzing the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of a monitoring system wherein analyzing the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured speech intelligibility and sound method. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuitry that detects a signal, analyzes the received signal by comparing a

depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

The combined teaching of Baranek et al. and Kimura et al. and Jacob as a whole, further disclosed of the circuits each include a network output port and includes a plurality of ambient condition detectors (par [0036]/alarms, smoke may be implemented).

The combined teaching of Baraneck et al. and Kimura et al. and Jacaob et al. as a whole, fail to disclose of the at least some of microphones carried by respective ones of the detectors. But, it is noted that it would have been obvious for one of the ordinary skill in the art to have modified the ambient detect with further having such concept of having the least some of microphones carried by respective ones of the detectors since it is merely an obvious variation of the engineering design based on his need-with no unexpected result produced for making used of the spacing in the microphone chamber and reduce wiring cost. Thus, it would have been obvious for one of the ordinary skill in the art to have modified combination with having the at least some of microphones carried by respective ones of the

detectors for making used of the spacing in the microphone chamber and reduce wiring cost.

Re claims 3, the system in claim 2, where at least some of the circuits are carried by respective ones of the detectors coupled to respective microphones ([0036]/alarms, smoke may be implemented).

Re claim 7, Baranek et al. disclosed a system comprising: a plurality of fixedly mountable microphones and each of the microphones is capable of receiving audio in an associated geographic region in which that microphone is located (fig.1 (14); par [0022,0026]/each detector unit with microphones to monitor) and circuits coupled to respective microphones including circuitry that automatically detect a receive signal and analyzed the received signal and evaluate intelligibility of audio received by the respective microphones and generates an indicator of intelligibility on a per microphone basis , the circuits each include a network output port (fig.1 (16,14,18-20); par [0022,0026, 0031]/sonic wave or and microphone detector for determining the strength/intelligibility as per microphone-basis in each location and automatically detect during such monitoring).

although, Baraneck et al. disclose of such automatically detecting a received signal. but, Baraneck et al. never specify of

having the microphone including circuitry that automatically detects a received signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of having a microphone including circuitry that automatically detects a received signal at a predetermined time (fig.1 (10); col.4 line 40-58; col.6 line 18-42/microphones being selectively used during diagnosis as per each block to detect signal at a predetermined time) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating the microphone including circuitry that automatically detects a received signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

The combined teaching of Baranek et al. and Kimura as a whole, failed to disclosed of the monitoring wherein circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of a monitoring

system wherein circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

The combined teaching of Baranek et al. and Kimura and Jacob as a whole, as modified further teach of the circuits and which includes a

plurality of distributed detectors of airborne ambient conditions (par [0036]/alarms, smoke may be implemented).

Re claim 8, a system as in claim 7, the detectors are selected from a class which includes smoke detectors and gas detectors (par 0036]. But, the combined teaching of Baraneck et al. and Jacob as a whole, never specify where at least some of the detectors carry respective ones of the microphones. But, it is noted the concept of having the at least some of the detectors carry respective ones of the microphones is merely an obvious variation of the engineering design based his need with no unexpected result in making used of the spacing in the microphone chamber and reduce wiring cost. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with al. at least some of the detectors carry respective ones of the microphones for making used of the spacing in the microphone chamber and reduce wiring cost.

Re claim 11, Baraneck et al. disclose of the method comprising: generating and providing at least one machine generated speech intelligibility test signal (fig.2; par [0035]/to generate test signal).

While, Baraneck et al. disclose of the test signal is generated (par [0035]/memory with recorded gunshots or voice prints for generating test signals).

But, Baraneck et al. fail to disclose of automatically generating the test signal at a predetermined time. But, Kimura et al. disclose of automatically generating the test signal at a predetermined time (fig.1 (1); col.4 line 40-58; col.6 line 18-42) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating automatically generating the test signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

The combined teaching of Baraneck and Kimura et al. as a whole, further disclose of automatically sensing the speech intelligibility test signal in at least one fixed location at the predetermined time (kim, fig.1 (3); col.5 line 18-42); evaluating the intelligibility of the sense speech intelligibility test signal((fig.2 (12,14); par [0022,0026, 0031]/detector with determining the strength as per for determining which is closest to incident).

However, the combined teaching of Baranek et al. and Kimura as a whole, failed to disclosed of the detecting wherein detecting a sensed signal, analyzing the detected signal by comparing a depth of modulation thereof with the test signal in each of a plurality of frequency bands, evaluates the intelligibility of audio sense speech intelligibility test signal based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of the detecting wherein detecting a sensed signal, analyzing the detected signal by comparing a depth of modulation thereof with the test signal in each of a plurality of frequency bands, evaluates the intelligibility of audio sense speech intelligibility test signal based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the detecting wherein detecting a sensed signal, analyzing the detected signal by comparing a depth of modulation thereof with the test signal in each of a plurality of frequency bands, evaluates the intelligibility of

audio sense speech intelligibility test signal based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

Re claim 12, a method as in claim 11, which includes generating a plurality of speech intelligibility test signal(par [0035]/memory with recorded gunshots or voice prints for generating test signals).

Re claim 13, a method as in claim 11 which includes sensing the speech intelligibility test signal at a plurality of spaced apart, fixed locations ("*fig.2(14)*").

Re claim 14, a method as in claim 13 which includes: transmitting the sensed speech intelligibility test signal from the plurality of locations to a common site and then processing same to evaluate intelligibility thereof ("*par [0025-0026")*.

Re claim 15, a method as in claim 14, wherein the processing of at common site. But, the combined teaching of Baraneck and Jacob et al. as a whole, fail to disclose of the visually presenting processing results.

But, official notice is taken the concept of visually presenting processing results is well known in the art. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination wherein visually presenting processing results for enabling the user with the ability to determined the exact location of the incident.

Re claim 16, the method as in claim 14, the sensed speech intelligibility test signals receive initial processing prior to being coupled to the common site (fig.2 (20,22).

Re claim 17, the method as in claim 16 with the initial processing conducted on a per location basis and where initially processed results are each indicative of intelligibility of received audio (see claim 16 rejection).

Re claim 18, Baraneck et al. discloses an apparatus comprising: at least one ambient airborne condition sensor; control circuits coupled to the sensor and a microphone that receives signals signal at audible frequencies coupled to the control circuits, where the control circuits automatically detect received signal , analyzed the receive signal and establishing an intelligibility in response to signals from the microphone (fig.2 (12,14); par [0022,0026, 0031,0035]; to be detected by microphones and monitoring sonic wave).

Although, Baraneck et al. disclose of such automatically detecting a received signal, but, Baraneck et al. never specify of having the microphone including circuits that automatically detects a received signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of having a microphone including circuits that automatically detects a received signal at a predetermined time (fig.1 (10); col.4 line 40-58; col.6 line 18-42/microphones being selectively used during diagnosis as per each block to detect signal at a predetermined time) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating the microphone including circuits that automatically detects a received signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

The combined teaching of Baranek et al. and Kimura as a whole, failed to disclosed of the monitoring wherein circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, establish an intelligibility index based upon the comparative strength of modulation in response to signals from the

microphone where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of a monitoring system wherein circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, establish an intelligibility index based upon the comparative strength of modulation in response to signals from the microphone where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, establish an intelligibility index based upon the comparative strength of modulation in response to signals from the microphone where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

Re claim 19, the apparatus as in claim 18, which provides at least one port for connection of external microphone (fig.2 (14, 18, 24) to monitor outside noise and send).

Re claim 20, an apparatus as in claim 18, which include the network communications port (fig.2).

Re claim 21, the apparatus as in claim 20 with the speech intelligibility, wherein the intelligibility index comprises at least one of STI, RASTI, SII, or, a subset of one of STI, RASTI, SII (Jacob, fig.1).

Re claim 22, the apparatus as in claim 18 with the ambient condition sensor, wherein the ambient condition sensor comprises at least one of a smoke sensor, a flame sensor, a thermal sensor or a gas sensor (par [0036]).

Re claim 23, the apparatus as in claim 22, wherein the control circuits include a processor with inherent of having the executable instructions for carrying out intelligibility index processing (fig.2; par [0035]/memory and storing/software to enable the processing).

Re claim 24, the apparatus as in claim 23 which includes a network communications port, the port facilitating coupling electrical energy

to at least the control circuits, and coupling intelligibility indices at least from the control circuits to a medium (fig.2 (14,18,20)).

Re claim 25, an apparatus as in claim 24 where the communications port includes an interface for carrying out bi-directional communication via a medium ("*fig.2 (24)/to carry bi-directional communication*").

Re claim 26, the apparatus as in claim 25, where the interface includes circuits coupled to at least one of an electrical cable or an optical cable (par [0030]).

3. Claims 4-6; 9-10; 32, 35-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baraneck et al. (US 2003/0021188 A1) and Jacob (US 6,792,404 B2) and Kimura et al. (US 2003/0128850 A1).

Re claim 4, Baraneck et al. disclosed a system comprising: a plurality of fixedly mountable microphones; each of the microphones is capable of receiving audio in an associated geographic region in which that microphone is located and circuits coupled to respective microphones including circuitry that automatically detect a received signal, that analyzed the received signal and evaluating intelligibility of audio received by the respective microphones and generating an indicator of intelligibility on a per microphone basis (fig.2 (12,14); par [0022,0026, 0031-0032]/detectors as per locations in the buildings

with determining the strength as per for determining which is closest to incident).

although, Baraneck et al. disclose of such automatically detecting a received signal. **B**ut, Baraneck et al. never specify of having the microphone including circuits that automatically detects a received signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of having a microphone which detects a received signal at a predetermined time (fig.1 ; par [0029]) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating the microphone including circuits that automatically detects a received signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

However, the combined teaching of Baranek et al. and Kimura as a whole, failed to disclosed of the analyzing wherein circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio receive by

the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of a monitoring system wherein circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

The combined teaching of Baranek et al. and Kimura and Jacob as a whole, further disclosed of the circuits each include a network output port *a*nd circuitry that produces speech intelligibility test signals and at least one audio output device which is separate form the microphone (par [0027,0035]/also audible speakers with speech to produced and have microphones accordingly).

While, combined teaching of Baranek et al. and Jacob as a whole, disclose of the detecting the speech intelligibility test signals and being received as per microphone, however, they fail to disclose the output device specifically audibly produce a pres-stored speech intelligibility test signals which will be received by the microphones. But, Kimura et al. disclose of such specifically audibly produce the pres-stored speech intelligibility test signals which will be received by the microphones (par [0028, 0039]) for enabling self-diagnosis level operation by the loudspeaker. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination wherein specifically audibly produce the pres-stored speech intelligibility test signals which will be received by the microphones for enabling self-diagnosis level operation by the loudspeaker.

Re claim 5, a system as in claim 4, which includes control circuits coupled to the microphones and the audio output device, the control circuits couple electrical representations of the speech intelligibility test signals to the output device (fig.2 (14,30); par [0036]/outputs and microphone detecting).

Re claim 6, a system as in claim 5 which includes a plurality of audio output devices coupled to the control circuits(fig.2 (30); par [0026,0036]/each detect (12) with corresponding audio (30)).

Re claim 9, Baraneck et al. disclosed of a system comprising: a plurality of fixedly mountable microphones, each of the microphones is capable of receiving audio in an associated geographic region in which that microphone is located and circuits coupled to respective microphones including circuitry that automatically detects a received signal, analyzes the received signal and evaluates intelligibility of audio received by the respective microphones and generates an indicator of intelligibility on a per microphone basis (fig.2 w (12,14); par [0022,0026, 0031-0032]/detectors as per locations in the buildings with determining the strength as per for determining which is closest to incident).

although, Baraneck et al. disclose of such automatically detecting a received signal. but, Baraneck et al. never specify of having the microphone including circuits that automatically detects a

received signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of having a microphone including circuits that automatically detects a received signal at a predetermined time (fig.1; par [0029]) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating the microphone including circuits that automatically detects a received signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

However, the combined teaching of Baranek et al. and Kimura as a whole, failed to disclosed of the analyzing wherein circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio received by the respective microphones based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of a monitoring system wherein circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates

intelligibility of audio received by the respective microphones based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as received by the microphone . Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio received by the respective microphones based upon the comparative depth of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

The combined teaching of Baranek et al. and Kimura and Jacob as a whole, further disclose of the circuits each include a network output port and where the control circuits which include inherent feature of at lest one of logic or executable instructions for producing speech

intelligibility test signals to be audibly output by the at least one audio output device that is separate form the microphones (fig.2 ; par [0027,0035]/also audible speakers with stored speech to produced and have microphones accordingly).

Re claim 10, the System as in claim 9 which includes inherency of having additional executable instructions for processing the speech intelligibility test signals received from the respective microphones (fig.12; par [0035]/all software implemented with memory and processor).

Re claim 32, Baraneck et al. disclose of a system comprising: control circuits for producing electrical representations of speech intelligibility test signals (par [0027,0035]/also audible speakers with speech to produced and have microphones accordingly).

but, Baraneck et al. never specify of having automatically producing test signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of automatically producing test signal at a predetermined time (fig.1 (1); par [0029]) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to

have modified the combination with incorporating automatically producing test signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

However, the combined teaching of Baranek et al. and Kimura as a whole, fail to disclose of producing a pres-stored speech intelligibility test signals. But, Kimura et al. disclose of such specifically pres-stored speech intelligibility test signals (par [0028, 0039]) for enabling self-diagnosis level operation by the loudspeaker. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination wherein pres-stored speech intelligibility test signals for enabling self-diagnosis level operation by the loudspeaker.

The combined teaching of Baranek et al. and Kimura as a whole, disclose of at least one audible output device coupled to the control circuits to audibly emit the speech intelligibility test signals, and a plurality of spaced apart acoustic sensors, each of the acoustic sensors is capable of receiving audio in an associated geographic region in which that acoustic sensor is located and circuits coupled to the respective acoustic sensors including circuitry that automatically detects the received audio at the predetermined time (kim, fig.1; par [0038-0039]), analyzes the received audio and

evaluates intelligibility of audio received by the respective acoustic sensors and generates an indicator of intelligibility on a per acoustic sensor basis, wherein the at least one audio output device is separate from the acoustic sensors (fig.2 (12,14); par [0035]).

The combined teaching of Baranek et al. and Kimura as a whole, fail to disclose of the received audio by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio received by the respective acoustic sensors based upon the comparative depth of modulation where reduction in modulation depth of the received audio is associated with loss of intelligibility.

But, Jacob disclosed of a monitoring system wherein circuits that detects a signal, analyzes the received audio by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio received by the respective acoustic sensors based upon the comparative depth of modulation where reduction in modulation depth of the received audio is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as

received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuits that detects a signal, the received audio by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, evaluates intelligibility of audio received by the respective acoustic sensors based upon the comparative depth of modulation where reduction in modulation depth of the received audio is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

Re claim 35, a system as in claim 32, which include a plurality of audio output devices coupled to the control circuits (fig.2 (30)).

Re claim 36, the system as in claim 32, which includes a plurality of distributed ambient condition detectors (par [0036]).

Re clam 38, the system as in claim 32 where the control circuits include the inherent executable instructions for producing speech intelligibility test signals to be audibly output by the at least one audio output device (par [0035]).

Re claims 39, the system as in claim 38 which includes additional executable instructions for processing the speech intelligibility test signals received from the respective sensors (see claim 38 as above).

Re claim 40, Baranek et al disclose of an apparatus comprising: a source of pre-stored intelligibility test signals; a plurality of loud speakers coupled to the source so as to broadcast selected test signals (fig.1 (12,14); par [0027; 0035]).

But, Baraneck et al. never specify of broadcasting the test signal at a predetermined time. But, Kimura et al. disclose of a broadcasting system wherein the similar concept of broadcasting the test signal at a predetermined time (fig.1 (1); par [0029]) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with incorporating broadcasting the test signal at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

The combined teaching of Baraneck et al. and Kimura as a whole, a plurality of microphones which are separate form the plurality of loudspeakers and which receive at least some of the broadcast test

signals, each of the microphones in the plurality of is capable of receiving audio in an associated geographical regions in which the microphone is located and having at least one detection circuit coupled to a respective microphone that automatically detects the received signals, analyzes the received signals (fig.1 (12,14).

But, Jacob disclosed of a monitoring system wherein circuits that detects a signal, analyzes by comparing a depth of modulation thereof with the broadcast test signal in each of a plurality of frequency bands and generates a speech intelligibility indicium associated with the respective microphone based upon the comparative depth of modulation where reduction in modulation depth of the received signals is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved measured audio intelligibility as received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuits that detects a signal, the received audio by comparing a depth of modulation thereof with the broadcast test signal in each of a plurality of frequency bands and generates a speech intelligibility indicium associated with the respective microphone based upon the comparative depth of modulation where reduction in

modulation depth of the received signals is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

The combined teaching of Baraneck et al. and Kimura and Jacob as a whole, transmitting that indicium via a medium to a displaced site (fig.1-2).

Re claim 41, the system as in claim 40, the detectors are selected from a class which includes smoke detectors and gas detectors (par 0036]. But, the combined teaching of Baraneck et al. and kimuara and Jacob as a whole, fail to disclose of where at least some of the detectors carry respective ones of the microphones. But, it is noted the concept of having the at least some of the detectors carry respective ones of the microphones is merely an obvious variation of the designer's need with no unexpected result in making used of the spacing in the microphone chamber and reduce wiring cost. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with having at least some of the detectors carry respective ones of the microphones for making used of the spacing in the microphone chamber and reduce wiring cost.

Re claim 37, Baraneck disclose of the system comprising: control circuits for producing electrical representations of speech

intelligibility test signals and emit a speech signal (fig.1 (12,14); par [0035]/control circuits and producing electrical speech signal).

But, Baraneck fail to disclose of at least one audible output device coupled to the control circuits to automatically audibly emit the speech intelligibility test signals at a predetermined time. But, Kimura et al. disclose of such specifically at least one audible output device coupled to the control circuits to automatically audibly emit the speech intelligibility test signals at a predetermined time (par [0026; 0028, 0035; 0039]) so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination wherein specifically at least one audible output device coupled to the control circuits to automatically audibly emit the speech intelligibility test signals at a predetermined time so as to prevent reduction of sound clearness caused by interference of the loudspeaker broadcastings at the adjacent blocks during self-diagnosis operation of the loudspeakers.

The combined teaching of Baraneck and kimura et al. al. as a whole, disclose of the plurality of spaced apart acoustic sensors; the acoustic sensors can receive the speech intelligibility test signals and circuits coupled to respective acoustic sensors including circuitry that automatically detects the receive signal at the

predetermined time (kim; par [0038-0039]) and for evaluating intelligibility of audio received by the respective acoustic sensors and generating an indicator of intelligibility on a per acoustic sensor basis and the plurality of smoke detectors (fig.2 (14,24); par [0036]).

However, The combined teaching of Baraneck and kimura et al. al. as a whole, failed to disclosed of the analyzing wherein circuitry that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility. But, Jacob disclosed of a monitoring system wherein circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility (fig.1 (10-13); col.1 line 26-32; col.1 line 39-57; col.2 line 1-25/spectrum analyzer to analyzed the audio signal with reduction of modulation of the signal for intelligibility at various locations and thus various sounds spectrum received and thus inherently various sound spectrums and frequency bands) for providing an improved

measured audio intelligibility as received by the microphone. Thus, it would have been obvious for one of the ordinary skills in the art to have modified the combination with the circuits that detects a signal, analyzes the received signal by comparing a depth of modulation thereof with a test signal in each of a plurality of frequency bands, that evaluates intelligibility of audio receive by the microphones based upon the comparative strength of modulation where reduction in modulation depth of the received signal is associated with loss of intelligibility for providing an improved measured audio intelligibility as received by the microphone.

The combined teaching of Baraneck and Kimura and Jacob et al. as a whole, fail to disclose of fail to disclose of the wherein at least some of the detectors carry respective one of the acoustic sensor. But, it is noted the concept of having of at least some of the detectors carry respective ones of acoustic sensors is merely an obvious variation of the designer's need with no unexpected result generated for optimally making used of the spacing in the microphone chamber and reduce cost. Thus, it would have been obvious for one of the ordinary skill in the art to have modified the combination with having of at least some of the detectors carry respective ones of acoustic sensors for optimally making used of the spacing in the microphone chamber and reduce cost.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. P./

Examiner, Art Unit 2614

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2614